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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/071,992	02/08/2002	Siegfried Mailaender	US 20 01 1067	2010
7590 03/29/2004			EXAMINER	
Paul D. Greeley, Esq. Ohlandt, Greeley, Ruggiero & Perle, L.L.P. 10th Floor One Landmark Square Stamford, CT 06901-2682			LEE, HWA S	
			ART UNIT	PAPER NUMBER
			2877	

DATE MAILED: 03/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/071,992

Applicant(s)

MAILAENDER ET AL.

Examiner

Andrew H. Lee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 December 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

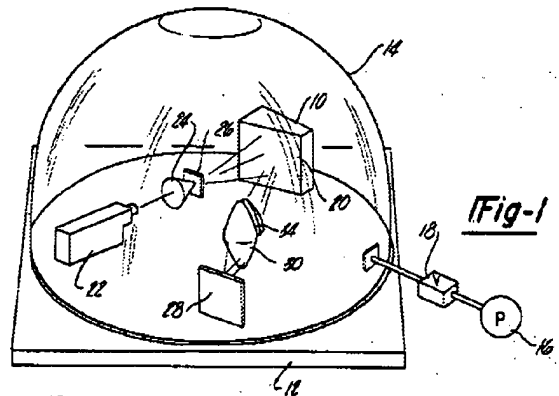
(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-17 rejected under 35 U.S.C. 103(a) as being unpatentable over Hung et al (4,139,302) in view of Swanson et al (5,459,570) and Solomon (5,675,412).

As for **claim 1**, Hung et al (Hung hereinafter) shows an interferometer comprising:

an optical circuit (22, 24, 26, 28, 30, 34) for providing an optical signal from and/or to the DUT (10);

a shielding unit for holding the optical circuit and for providing at least a partial shielding of the optical circuit against mechanical noise (12).



Hung does not expressly show the use of an optical fiber for providing to/from the DUT. Swanson et al (Swanson hereinafter) show an apparatus for performing interferometric optical measurements wherein Swanson teaches that an apparatus utilizing optical fibers and bulk optical components are functional equivalents (column 9, lines 35+).

At the time of the invention, one of ordinary skill in the art would have provided an optical signal via an optical fiber by replacing the bulk optical paths with optical fibers since the use of optical fibers and bulk optics are functional equivalents and furthermore, it is within the knowledge of one of ordinary skill art that optical fibers have an advantage that precise alignment of the bulk optical components is no longer as important and the apparatus can be made more compact by folding beam paths by rearranging components.

In regards to the shielding unit, although Hung does not expressly say that the shielding unit (12) performs the function of "providing at least a partial shielding of the optical circuit against mechanical noise," the table would inherently provide a partial shielding against mechanical noise since the table has some mass.

As for **claims 2-6**, Hung shows that it is known in the prior art that using heavy damped tables and at the time of the invention, one of ordinary skill in the art would have utilized a heavy damped table in order to isolate the interferometer from external vibrations (column 2, lines 1-5). Although Hung teaches that a heavy damped table is not necessary, one of ordinary skill in the art would be motivated to do so in order to further isolate the optical circuit from vibration thus further improving signal quality.

As for **claims 7, 12, 13, and 16**, Solomon shows the use of additional damping devices and materials and at the time of the invention, it would have been obvious to one of ordinary skill in the art to place an additional damping device between the optical circuit and the shielding unit as it would have been well within the skill level of a skilled artisan to use various damping materials in different shapes, including rubber sheets, or

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other damping devices in between the shielding unit and the optical circuit in order to further isolate the interferometer from any vibration passing through the heavy damped table.

As for **claim 8**, the optical circuit is an interferometer (column 2, lines 51+).

As for **claims 9-11 and 17**, it would have been obvious to one of ordinary skill in the art to use a receiving device in order to place the sample in the interferometer, whether it is just the table (12) or any other means to hold the sample. In the instant case, the sample (10) is placed outside (on top) of shielding unit (12).

As for **claim 14**, the components of the interferometer provide substantially no vibration.

As for **claim 15**, Hung shows all element as claimed in claim 1 in addition to:

an optical signal source (22) and

an optical receiver (28).

Response to Arguments

3. Applicant's arguments with respect to claims 1-17 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Papers related to this application may be submitted to Technology Center (TC) 2800 by facsimile transmission. Papers should be faxed to TC 2800 via the PTO Fax Center located in CP4-4C23. The faxing of such papers must conform with the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989). The CP4 Fax Center number is 703-872-9306 for regular communications and for After Final communications.

If the Applicant wishes to send a Fax dealing with either a Proposed Amendment or for discussion for a phone interview then the fax should:

- a) Contain either the statement "DRAFT" or "PROPOSED AMENDMENT" on the Fax Cover Sheet; and
- b) Should be unsigned by the attorney or agent.

This will ensure that it will not be entered into the case and will be forwarded to the examiner as quickly as possible.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Hwa Lee whose telephone number is (571) 272-2419.

The examiner can normally be reached on M-Th. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank Font can be reached on (571) 272-2415.



Andrew Lee
Patent Examiner
Art Unit 2877

March 12, 2004/ahl



Frank G. Font
Supervisory Patent Examiner
Technology Center 2800